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Wearable superhigh energy density supercapacitors using hierarchical ternary metal selenides composite of $CoNiSe_2$ microspheres decorated with $CoFe_2Se_4$ nanorods

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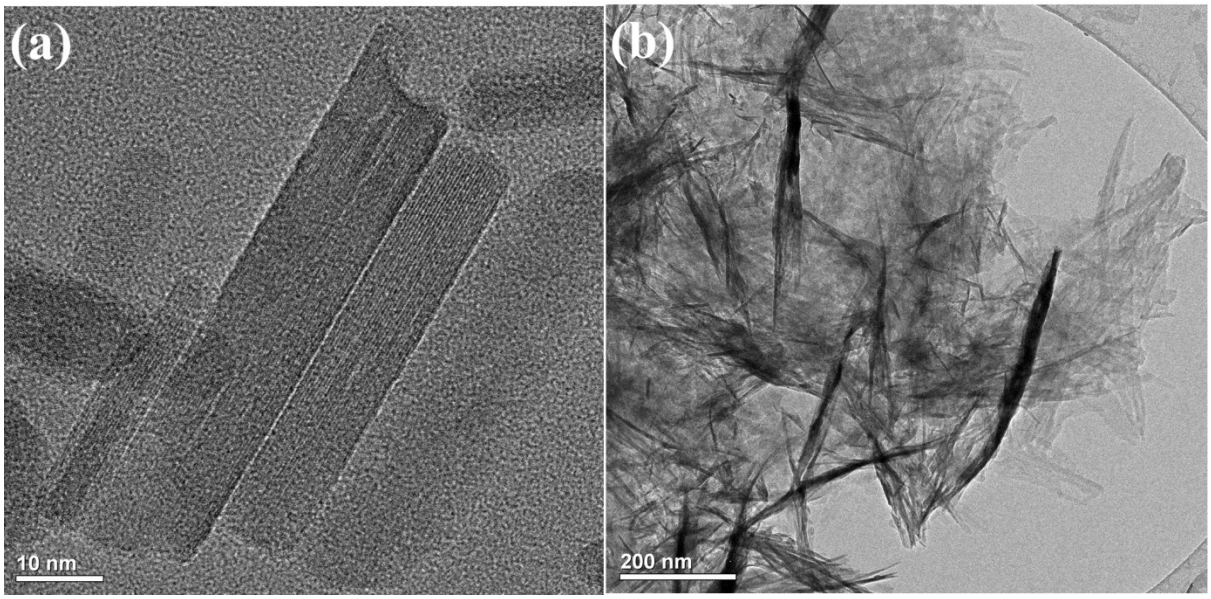

Figure S1 TEM images of CFS and CNS materials.

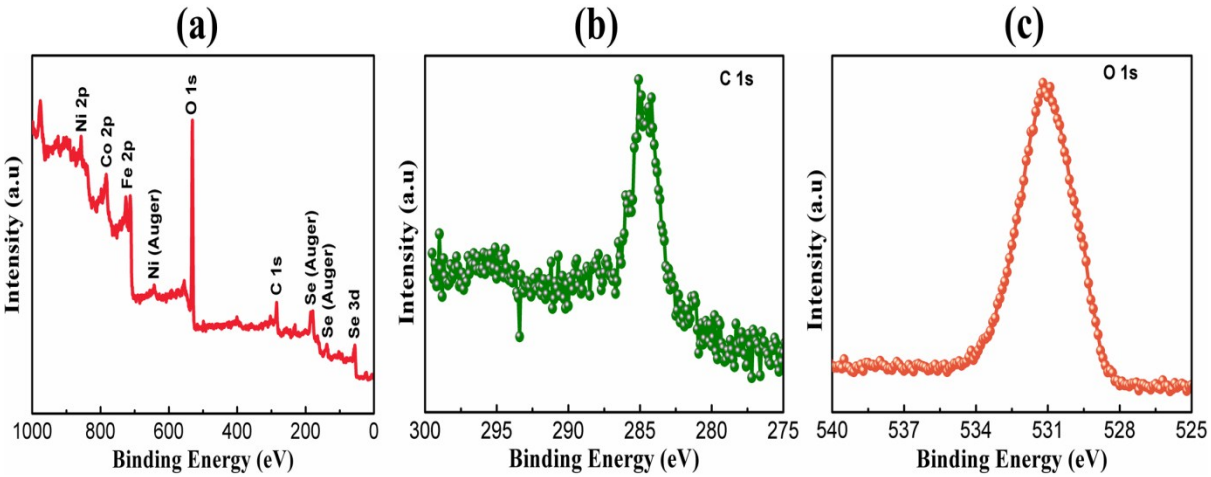

Figure S2. XPS survey scan spectrum of the (a) CFS-CNS and high-resolution XPS plots of (b) C 1s and (c) O 1s.

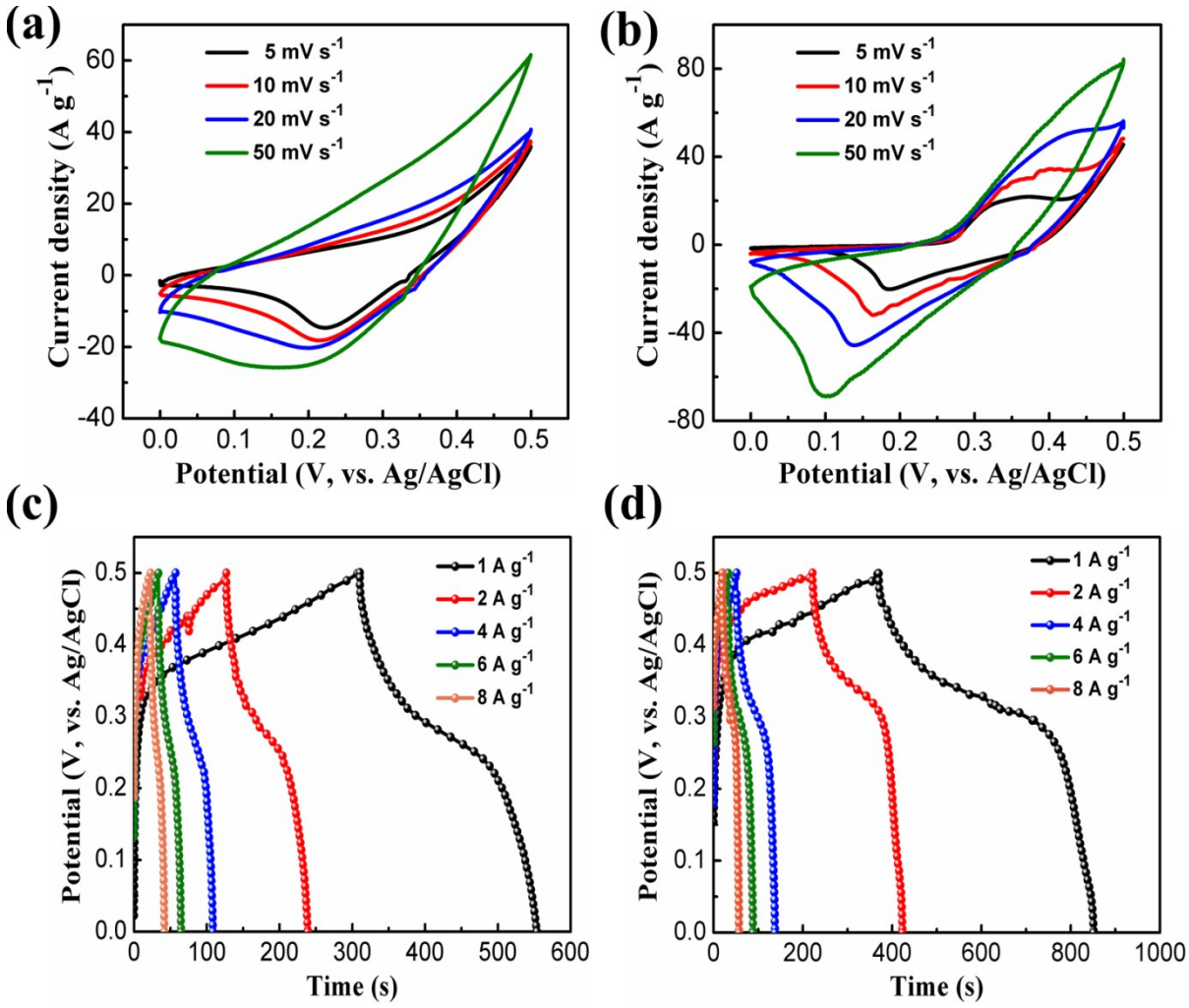

Figure S3 Electrochemical performance of the samples. (a) CV curves of the CFS and (b) CNS. Galvanostatic charge/discharge curves of (c) CFS and (d) CNS at different current densities from 1–8 A g^{-1}.

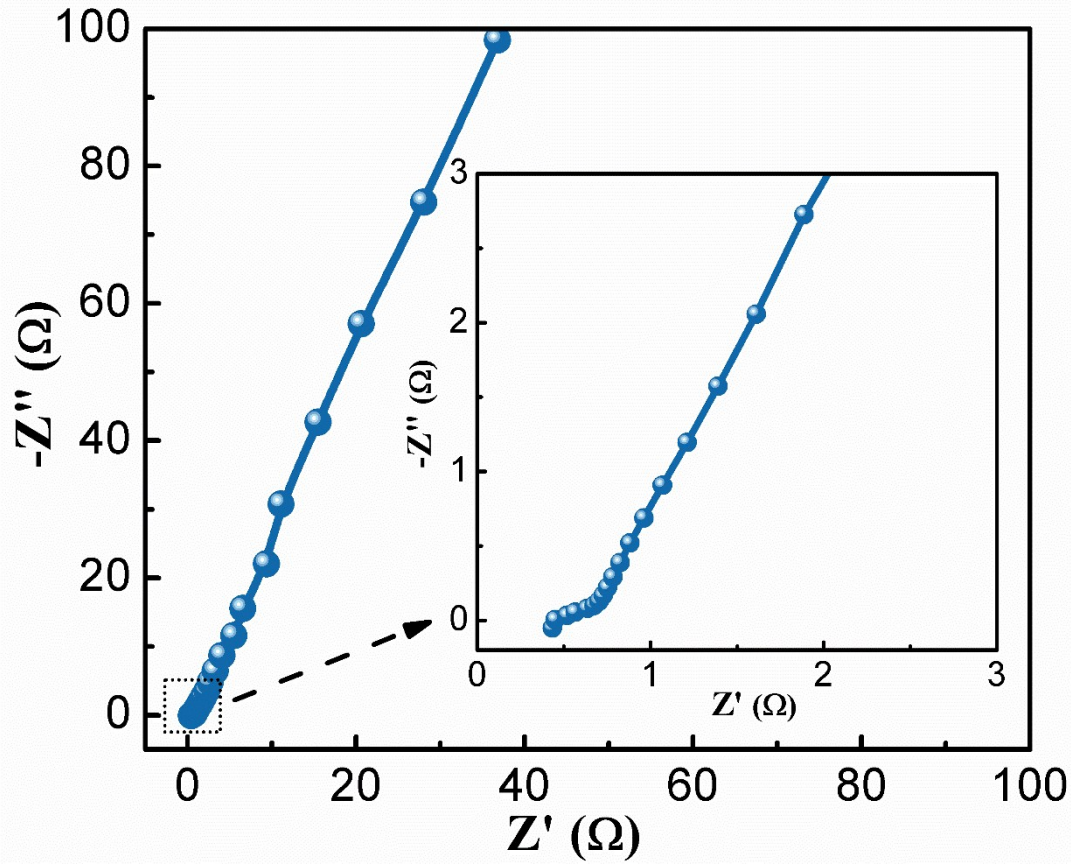

Figure S4 EIS plot of the assembled CFS-CNS//CFS-CNS symmetric SC.

Table S1. Comparative electrochemical performance of CFS-CNS//CFS-CNS symmetric device with previously reported SCs.

Symmetric or Asymmetric device	Cycling stability of devices	Energy densities of devices	Reference
Ni_3Se_2//AC	98% after 5000 cycles	32.8 Wh kg^{-1} at 677 W kg^{-1}	**[Ref. 14]** *Adv. Energy Mater.*
$CoNi_2S_4$-G-$MoSe_2$// $CoNi_2S_4$-G-$MoSe_2$	108% after 2000 cycles	38.6 Wh kg^{-1} at 885.6 W kg^{-1}	**[Ref. 16]** *Adv. Energy Mater.*
$FeCo_2S_4$-$NiCo_2S_4$// $FeCo_2S_4$-$NiCo_2S_4$	92% after 3000 cycles	45.8 Wh kg^{-1} at 1070 W kg^{-1}	**[Ref. 21]** *Adv. Energy Mater.*
ZCS/$Ni(OH)_2$//ZCS/ $Ni(OH)_2$	78% after 10000 cycles	74.93 Wh kg^{-1} at 650 W Kg^{-1}	**[Ref. 35]** *Adv. Energy Mater.*
GrMnO_2//GrMoO_3	--	42.6 Wh kg^{-1} at 276 W kg^{-1}	**[Ref. 39]** *Adv. Funct. Mater.*
NiSe@$MoSe_2$//N-PMCN	91.4% after 5000 cycles	32.6 Wh kg^{-1} at 415 W kg^{-1}	**[Ref. 40]** *ACS Sustainable Chem. Eng.*
Fe-SNC//Fe-SNC	95% after 1000 cycles	14.4 Wh kg^{-1} at 224.2 W kg^{-1}	**[Ref. 41]** *Adv. Energy Mater.*
$NiCo_2S_4$-NCF//OMC-NCF	~90% after 3000 cycles	45.5 Wh kg^{-1} at 512 W kg^{-1}	**[Ref. 42]** *Adv. Energy Mater.*
CFS-CNS//CFS-CNS	~97% after 3000 cycles	80.2 W h kg^{-1} at 1000 W kg^{-1}	**This Work**

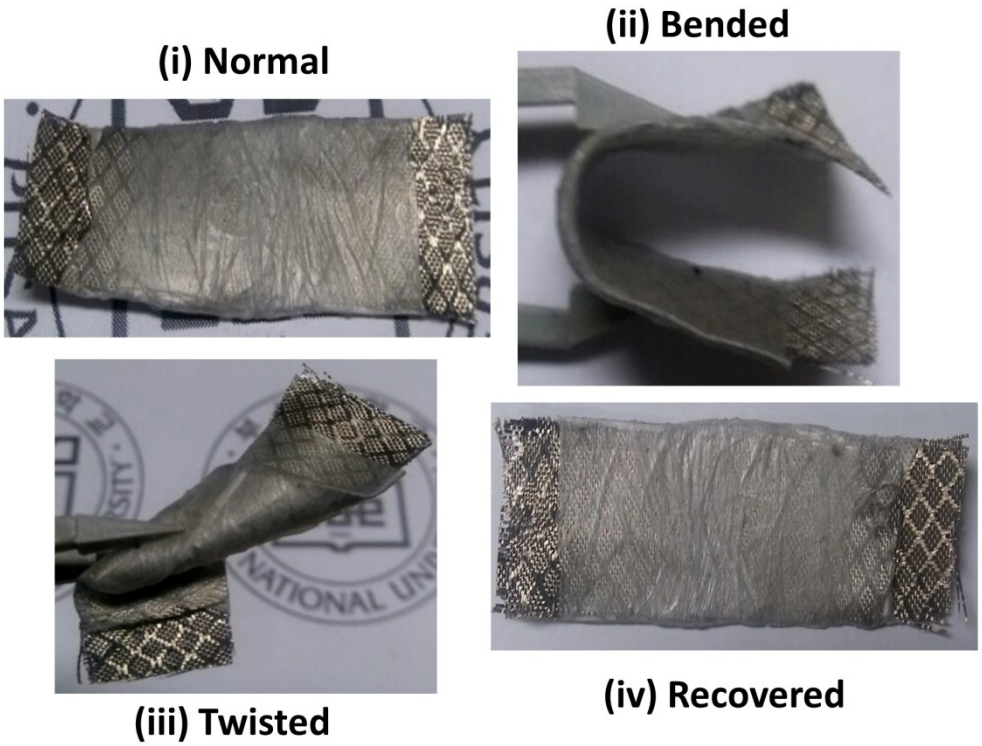

Figure S5 Photographs of symmetric supercapacitor at various bending conditions